Total Pancreatectomy and Islet Auto-Transplant Surgery

Introduction

You are reading this because you are thinking about, or have chosen to have, total pancreatectomy and islet auto-transplant surgery to treat your chronic pancreatitis. You may have struggled with chronic pancreatitis for some time, and your pancreas may be very damaged. This surgery is a possible treatment for your condition. For some people, a pancreatectomy may be the only way to relieve pain.

Before you can have this surgery, we must evaluate you to be sure that you are a good candidate for it. And before we can do this evaluation, or consult, we must have your medical records.

Please sign and return a release of records form as soon as possible. This will allow the hospital that most recently treated you to release your medical records to us.

Most of your medical records may be faxed to us. But we will need copies of the original scans you have had, including:

- An endoscopic ultrasound scan (EUS)
- A magnetic resonance cholangiopancreatography scan (MCRP)
- A CT scan of your abdomen (belly) and pelvis (hip) areas

These scans should not be more than a year old.

During the consult we will give you a lot of information about this surgery. This is the time to ask any questions you may have. In turn, we will ask you many questions about your pancreatitis.

After the consult, a team of doctors, specialists and other providers will review your case. This team will decide if total pancreatectomy and islet auto-transplant surgery is right for you.

If you have this surgery, we will give you the best care possible. But even with the best care, the surgery will change your life. The first several months after surgery will not always be easy. At times you may find it hard to adjust. We will help you during this period as much as we can.

In the following sections, you will learn more about what total pancreatectomy and what islet auto-transplant surgery is. You will also learn about some of the possible risks and benefits of the surgery. After reading this information, please let us know if you have any questions or concerns.
What is total pancreatectomy and islet auto-transplant surgery?

Total pancreatectomy is surgery to remove all of the pancreas. When the pancreas is taken out, the clusters of cells in the pancreas that make insulin (called islets) are also taken out. Without these islets, your body cannot make insulin. And without insulin, you will develop diabetes.

To prevent diabetes or make it milder, an islet auto-transplant can be done at the same time as the pancreatectomy. If you qualify for an islet auto-transplant, your islets will be taken from your pancreas and put into your liver. Once in the liver, the islets may begin to make some or all of the insulin that you need.

Because the islets are your own tissues, you do not need to take any medicine to prevent rejection as you would if tissues from another person were transplanted into you.

What are the chances that I will get diabetes?

About one third of patients who have an islet auto-transplant will not need to take insulin. Your chances of avoiding diabetes are better if you have never had surgery on your pancreas before.

What if I already have diabetes?

If you already have diabetes, you may not qualify for this surgery.

How do I qualify for this surgery?

- You must need a pancreatectomy.
- You must not already have diabetes, or your diabetes must be mild.
- You must not have cancer of the pancreas.

You will also need a doctor near your home who can manage your care after the surgery.

Will this surgery relieve my pain?

More than half of patients have complete pain relief, and most have at least some relief.

What happens during the surgery?

The pancreas will be taken out, and the islets from the pancreas will be transplanted into the liver. In addition, the spleen may need to be removed (splenectomy), and you may need to have tubes put into your body to empty your stomach or help feed you.

Splenectomy

Removal of the spleen is called splenectomy. The spleen is an organ that helps fight infection. When it is removed, you are less able to fight an infection. For this reason, you will need to be immunized for possible infections three weeks before the surgery.
These immunizations include:

- **Streptococcus pneumonia vaccine.** This protects against a type of pneumonia caused by strep bacteria.

- **Neiseria meningitis vaccine.** This protects against a common and serious form of meningitis and pneumonia.

- **Haemophilus influenzae vaccine.** This is not a flu shot. It protects against Haemophilus influenzae bacteria, which is another cause of pneumonia.

- **Seasonal flu shot.**

**Gastric tube, or G-tube**

The pancreas produces chemicals called enzymes that help digest food. When the pancreas is taken out, the stomach may not work as well. Food and juices may stay in the stomach instead of moving into the intestines. This can cause nausea and vomiting. To empty the stomach, a gastric tube, or G-tube, may be put into it. The length of time the tube will be in place will vary from person to person. Sometimes it can be removed within 2 to 3 weeks. But it may be needed for up to 3 months.

**Nasogastric tube**

A tube may be inserted through the nose to the stomach. Called a nasogastric tube, it works the same as a gastric tube.

**Jejunostomy tube, or J-tube**

After the surgery it may be necessary to put in a feeding tube. A jejunostomy tube, or J-tube, may be put through the belly into the intestines. At first, most nutrition may need to be given in liquid form through the J-tube. Over time, you should be able to move to a more normal but still soft and low-fat diet. This can take up to 3 months.

**What happens after the surgery?**

You will stay in the hospital for 2 to 3 weeks if there are no complications. When you go home, you will have many changes to get used to:

- You may need to get your nutrition intravenously (through an IV tube in a blood vein). This is called total parental nutrition (TPN). You will be weaned off TPN as you recover from your surgery.

- You may have a G-tube or J-tube in place for several weeks.

- You will have to begin taking pancreatic enzymes to digest your food.

- You will have to monitor your blood sugar levels and diet and inject yourself with insulin.

**Pancreatic enzymes**

If pancreatic enzymes weren't a part of your life before surgery, they will be afterwards. To digest your food, you will need to take pancreatic enzymes to replace those that your body no longer makes. You may have pain, gas and diarrhea for some time. Getting the right balance of enzymes can take up to a year. It can help to stay on a low-fat, high-protein, low-carbohydrate diet.

**Diabetes**

Even with an islet cell transplant you will need insulin after your pancreas is taken out. How long you will need insulin is uncertain. Before you have your surgery, you should arrange to meet with a diabetes specialist (endocrinologist) for the special help you will need after your surgery.
Narcotic withdrawal

If you have been living with chronic pancreatitis, you may have become dependent on narcotics to manage your pain. The longer you have used narcotics, the more dependent you may be. It is very hard to withdraw from narcotics. We will work with you to help you withdraw successfully. But you must commit totally to withdrawal. Withdrawal can cause both physical and emotional pain. We will support you as best we can to lessen your symptoms.

Pain management

Patients with chronic pancreatitis have often had chronic abdominal pain for months or even years. In fact, the main symptom of pancreatitis is abdominal pain. Chronic pain takes a toll on mood. For this reason, we ask that all patients be evaluated for the effect their pain is having on their mental health. This helps us plan the best treatment for each patient. It also helps us decide which, if any, anti-anxiety and anti-depressant medicines to use.

Our goals for pain management are to:

- decrease abdominal pain
- improve function
- decrease the use of and dependence on narcotics.

After surgery, we encourage you to use a pain management service. Within a few weeks after surgery, you should begin to take less pain medicine. This process will continue for several weeks or months. We need and expect your commitment to this plan.

What can I expect over the long term?

Some patients are able to give up narcotics entirely after surgery, while others continue to need to take them.

You will be on pancreatic enzymes the rest of your life. You will need the enzymes to help you digest food and absorb nutrients.

Depending on how well your transplanted islets work after the surgery, you may need to take insulin and to manage your blood glucose. Here are the results we've had so far in our program:

- ⅓ of our patients are on a steady daily dose of insulin (basal insulin).
- ⅓ of our patients are on a steady daily dose of insulin, plus additional doses as needed (basal and bolus insulin).
- ⅓ of our patients are insulin free.

For more information, go to:

- [www.uofmntransplant.org/adult/pancreatectomyandautoislettransplant](http://www.uofmntransplant.org/adult/pancreatectomyandautoislettransplant)
- [www.diabetes.umn.edu](http://www.diabetes.umn.edu)